

# CACTUS AND SUCCULENT JOURNAL

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Of America

XIX

JULY, 1947

No. 7



FIG. 63. One of the most popular Orchid Cacti, Prof. Ebert. Its color is a clear magenta. Haselton photo.



## CACTUS AND SUCCULENT JOURNAL

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FIG. 64. Long spined variety of *Mammillaria compressa* from Mexico. Fernando Schmoll lists this interesting plant as *M. cirrhifera* Mart. var. *longispina*. Haselton photo.

Schumann in his "Gesamtbeschreibung" regards *Mammillaria cirrhifera* as a synonym of *Mammillaria angularis* Lk. and Otto, where he states that the spines reach a length of 7 cm. ( $2\frac{3}{4}$  in.). Dr. Craig in his "Mammillaria Handbook" places both *M. cirrhifera* and *M. angularis* under the synonymy of *Mammillaria compressa*, and says that the spines of this species vary greatly in length, from 20 to 70 mm. ( $\frac{3}{4}$  to  $2\frac{3}{8}$  in.). This imported plant from Fernando Schmoll shows spines 4 inches long. Haselton photo.

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## DO YOU KNOW THE BROMELIADS?

By MULFORD B. FOSTER

Part VII



FIG. 65

*Nidularium billbergioides* might be mistaken for a *Canistrum* with its flower head on a six inch stem. Orange bracts hold white flowers.

*Quesnelia quesneliana* is a delightful species which can be classed among the "borderline" bromeliads. That is, it is a type which is essentially epiphytic in shape and water holding habit, but grows as a terrestrial in full sunlight. This *Quesnelia* seeks a seaside residence. Only a few bromeliads take to living quarters so close to the ocean where salt air would certainly kill many others.

Great masses of these *Quesnelias* are seen scattered among brambly rank growths of the seaside or bordering a swampy tide-water area where fiddler crabs silently disappear at the slightest noise. Those splendid, proud *Quesnelias* make such a dignified contrast to the sprawling plant forms surrounding them that one would never forget the sight.

Their flower scapes, like great torches held erect, seem to be made of watermelon pink crepe-paper. "They are artificial" is the first reaction of most everyone who sees them.

This species is such a large growing plant that it is rather doubtful if it will ever become a popular subject as a pot plant, but it is quite possible that it could be established on the seacoast in the tropical sections of North America.

*Quesnelia arvensis* will need little detailed description because the bloom, though smaller, is very similar to that of *Q. quesneliana*. *Q. arvensis* has been in cultivation for many years and wherever it has been exhibited when in bloom it has created quite a sensation. The leaves are dark green, pointed with faint grey bands underside.

*Quesnelia Liboniana* certainly has little resemblance to the large type of the genus. For many years it was classed as a *Billbergia* and to the eyes of a layman it would much more nearly resemble one, as it is a tall, green tubular plant which sends its new shoots on long stolons. The flowers, however, last longer than the *Billbergia* flowers. The flower scape is undulating and the entire flowering branch is rather graceful for such a stiff plant. The color combination of the flower is unusually beautiful, petals being deep purple encased in sepals of deep burnt-orange.



FIG. 66

*Quesnelia quesneliana* is among the "borderline" Bromeliads and one which likes the seaside. Its great torch-like flower head is a dazzling spectacle. (From "Brazil: Orchid of the Tropics" used by permission of Jacques Cattell Press.)

In its native habitat *Q. Liboniana* grows mostly on rocks; it is rather common in the forests within the city limits of Rio de Janeiro where Libon discovered it a century ago.

*Quesnelia humilis* is the smallest of the less than a dozen known *Quesnelia* species. It is a

6 to 8 inch tight rosette plant bearing, only slightly above the leaves, a beautiful, closely grouped cluster of bright cerise flowers surrounded by red bracts. This close harmony in color is very striking and is found also in *Nidularium rutilans*.

So far as I know it has never been known in horticulture until I brought it here in 1939. It is a very easy subject to grow as it requires almost no attention.

*Quesnelia lateralis* is one of the most curious bromeliads. This plant was the cause of considerable observation when I found it in the Organo mountains in 1940. I had noticed other bromeliads, *Dyckias* and *Encholirium* with an inflorescence that emerged from the side of the plant. This *Quesnelia lateralis* was the first epiphytic bromeliad that had come to my attention with this curious habit. It was very much surprised to find that this same species, with identical inflorescence also bloomed from the center, a botanical phenomenon.†) Originally this plant was named *Q. centralis*, the botanists thinking that they had two different species, but when the duplex blooming habit was recognized, *centralis* was placed in synonymy.

With this species under observation for four years, I have found that after the bloom has come out laterally two months later an identical bloom may appear out of the center. It is the most glorious flower in the whole family! The bracts are vivid flame-red . . . the flowers a brilliant cerulean blue. The colors simply carry you to the clouds.

One of the thrilling sights of the tropical American jungle is the silhouette of air-minded bromeliads crowded in their various habitat stratas, forming aerial gardens everywhere in the trees.

In their native haunts bromeliads somewhat follow a strata pattern, that is, species of *Neoregelia*, *Nidularium* and *Canistrum* are found on the first "floor" of jungle growth, and although they prefer the leaf-mold of the forest floor, where it is dark and humid . . . if it is too crowded they venture up to low stumps or low slung lianas. Species of *Billbergia*, *Vriesia* and *Aechmea*, some *Tillandsias* find pleasant abodes on the second "floor," a higher and slightly drier position than the floor, consequently these bromeliads enjoy more light and less humidity. The *Aechmeas* predominate in the third "floor" strata where the epiphytic bromeliads, seeking more light and air currents are of sterner and stiffer character. The tiny xerophytic *Tillandsias* reside in the upper strata; few other epi-

†) See *National Horticultural Magazine*, January, 1945

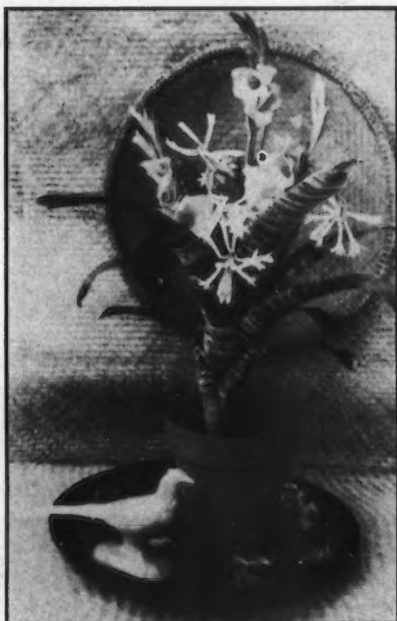


FIG. 67  
*Aechmea fasciata*, one of Mother Nature's original flower vases arranged with gladioli and tuberose in every "leaf cup."

phytic bromeliads find such rugged conditions favorable. However, there are always a few stray members of each genus overlapping the stratas and this merging of types makes for great adaptability within the family.

Considering the epiphytic bromeliads as a whole this remarkable adaptability makes them ideal house plants if given ordinary consideration. A lighted spot without being in direct sunlight reproduces the filtered light of the jungle satisfactorily enough and frequent wettings suffice for showers or nightly dews. One quick and most satisfactory way to water them is simply to hold them under the faucet of a bath tub or kitchen sink, thus the entire leaf gets wet and the microscopic scales can readily absorb their share of water while the greater portion of the water runs down the natural troughs of each leaf to fill the basal and central "cups" which should always remain filled with water. This does NOT rot the plant as so many people have mistakenly suggested. The basal portions of the leaves act as the "feeding" part of the bromeliad and the mixture of air, minerals and water, and in nature the fallen leaves provide the proper food for these air-minded bromels. Now and



then water on the roots is advisable mostly to hold the sand and leaf-mold soil firm or to moisten the roots for more elasticity if they should be potted in osmunda fiber which is advisable on several of the Tillandsias and Vriesias. If it is not convenient to water the bromeliads under a faucet, just pour water between each leaf. Heavy alkaline water is injurious to these acid loving air plants.

Bromeliads, in the jungle, thrive in the fluctuating temperatures of a tropical climate where the nights are generally cool but never freezing, and the days are warm and humid. So as house plants they can be very happy in temperatures ranging above freezing.

Bromeliads propagate by sending out a side shoot, usually at or soon after blooming time. This can be left on the mother plant indefinitely or, when enough roots have formed on the baby it can be severed and potted separately. Eventually the mother plant dies, but may have produced several offspring in the meantime.

Bromeliads produce two distinct types of seeds, the feathery or winged appendaged seeds which are nicely distributed by the wind, and the bacate-fruit seeds which are encased in palatable flesh desired by bird and beast who inadvertently distribute them. The tasty flesh is also desired by man (as in the pineapple and Bromelia) who more deliberately distributes the seeds.

The few pests bromeliads endure are several types of scale insects who seem to fully enjoy the water filled peltate scales on the leaves of many bromeliads; those that have rather stiff leaves but seem to be covered with peltate scales (shown in the white or gray bands on the

leaves) in such species as, *Aechmea fasciata*, *Neoregelia spectabilis*, harbor the black scale, while other leaves such as *Aechmea minitata discolor*, *Aechmea orlandiana*, etc., play host to a



Fig. 68

A natural arrangement in a living flower vase creates new principles of displaying the pride of the garden. Something to look forward to when other flower arrangements go stale!

white soft scale. Both scales are killed by a solution of contact spray, and if a large number of bromeliads are affected perhaps the best method is to dunk them in the solution, letting them drain upside down so as to leave no oil residue in the center of the plant. But if you have only one or two bromeliads to worry with, just pushing the scale off with an old tooth brush is the best method. The scale does little harm to the plant, but is unsightly.

To Be Continued Terrestrial Bromeliads

## NOTES ON HAWORTHIAS

By J. R. BROWN

*Haworthia Schmidtiana* Poelln. is another example of *Haworthia* which reproduces by means of plantlets developed on underground shoots; and which in time and under favorable conditions create a large, widespread colony of plants.

A photograph shows a comparatively young plant of *Haw. Schmidtiana* var. *angustata* Poelln. with a stolon which was approx. 26 cm. in length, and terminating in a plantlet. Two plantlets and the growing tip of a stolon are also shown in natural size and some variation in the thickness of these underground stolons is evident.

A stolon of *Haw. Schmidtiana* Poelln. was also measured at this same time which was 48 cm. in length and still elongating. The lengths of these stolons are only the measurements of a few examined, and as those examined were probably not growing under the most favorable conditions for the growth of long stolons, the maximum length may be greater.

The stolons seem to terminate in a plantlet and no branching of the stolon was observed as in the case of the stolons of *Haw. limifolia* var. *stolonifera* Resende.

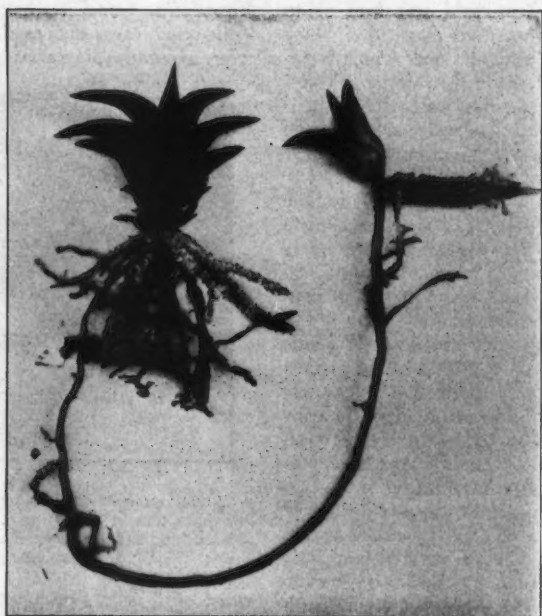


FIG. 69. *Haworthia Schmidtiana* var. *angustata* Poelln. Approx.  $\times 0.5$

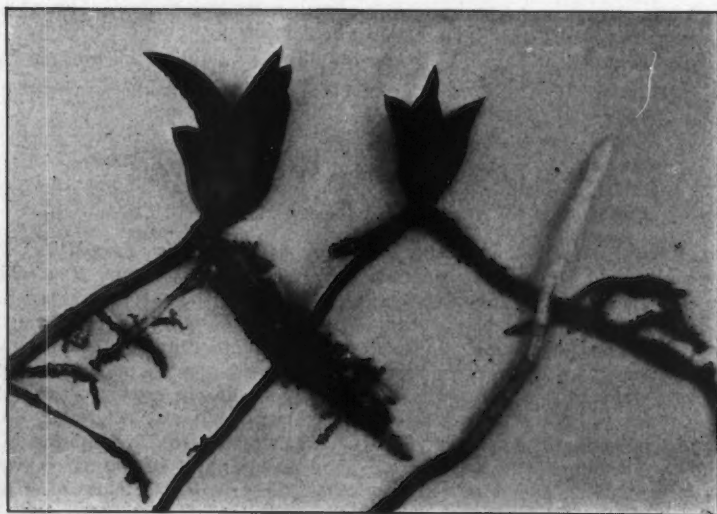


FIG. 70. Plantlets of *Haworthia Schmidtiana* var. *angustata* Poelln. Nat. size.



FIG. 71. One of the first photos of *Hylocereus calcaratus*

### From Costa Rica

The photo is the first showing of *Hylocereus calcaratus* Br. & R. Dr. Britton reports the plant from Limon, Costa Rica; if it really came from there, in all probability it had been brought over from the Pacific slope. My knowledge of the Atlantic slope is not sufficient to say that it positively does not occur there, although from a perhaps more than average series of experiences in its forests, that is my belief. I have seen it in some of the valleys of the southern slopes of Chirripo and although not too common, it forms large masses there. It was never in flower or fruit when seen.

My specimens were grown from a piece given to me many years ago by Brade, and I think it had been growing here for about twenty years before it flowered. These *Hylocerei* apparently only flower after they have formed large, straggling masses of growth. No fruits have set naturally here as yet.

It is unfortunate that the photo includes a branch of the ubiquitous "Reina del Baile" on the left. Immediately above the flower, a tip of the curious "Dinosaur Tail" is clearly seen.

This species and some other rare Costa Rica woodland cacti, were sent to California some few years ago, where I imagine they were difficult subjects in the severe climate; rain-forest cacti are not often grown well even in Europe.

*Hylocereus calcaratus*, as may be seen from the illustration, is well among the leaders of its alliance in floral beauty, and appears to be unique from the others in its completely spineless growths. These are of a deep shining green and the alate branches vary considerably in thickness according to the density of shade in which they grow; they are scandent, climbing, and cling by aerial roots to the trunks and branches of trees where they form great masses of intersupporting growths. Small plants are

remarkably attractive garden subjects and have a strange, reptilian suggestion about them.

I have finally made a long hoped for trip to see Austin Smith at Zarcero. He has a tiny garden full of interesting things. I was able to add *Clerodendron ugandense* to his collection—a blue flower in that genus was a surprise to him. He lent me a copy of the superb work of White and Sloane on the Stapelieae, and through it I have run down a species I brought back from Uganda in 1921. Dummer, to whom the species was dedicated, and I, have spent many pleasant hours together. He was a grand naturalist who was killed the following year, a sad loss to British science.

I was given a piece of an enormous *Caraluma* (?) at Kew, just after its arrival from Somaliland, with stems of about 21" in diameter and 10 to 12" high. I think this escaped inclusion in "The Stapelieae." My piece died as did all those at Kew as far as I know.

It has not been my luck to do much visiting in countries for these delightful plants; but I have seen two stick-like *Ceropegias* of Teneriffe with that enthusiastic Juan Bolinaga, and with him have scrambled around on the lava flows of Pico de Teide and found a spineless *Euphorbia canariensis* and nearby a strange *Zygophyllum* near the sea at Los Cristianos toward the south of the island.

I had hoped to meet Burchardt in the Canary Islands but our consul at Orotava warned us to leave. That was in June, 1936, so after a delightful week and some wizard excursions we left for home. The following year, we went to Brazil and across to the Chaco. There we found some strange Bromeliads and *Discocactus heptacanthus* and a new species of *Jatropha* and to my surprise, that lovely little floating sensitive-plant, *Neptunia*. Up the river at Los Descalvados was a cactus of the *Cereus* type which may possibly be new. It has remained alive here in Costa Rica but doesn't like our climate, where it is much wetter. *Discocactus* soon collapsed, and even the orchids have almost all succumbed.

Perez, the orchid collector, gave me a *Mamillaria* some months ago which he alleges one of his plant-collecting peons brought in—a genuine jewel of a specimen. It is an *elegans* type. If true that it was found here, it is surely a first record for Costa Rica.

C. H. LANKESTER.

### IDRIA COLUMNARIS

The "Cirio" of Baja California is a peculiar tree from an ecological point of view and has strange physical features. Experience in central

California (Vacaville) indicates that it can live here with the greatest of ease in a home 1,000 miles north of its habitat. This does not mean that it can establish itself naturally but it does mean that even young plants will grow here if moisture is furnished in summer time.

When a plant is found with these characteristics one wonders why the area where it grows naturally is so small. Can this be the beginning of a new genus which will spread beyond its present limits, or is it the remainder of one occupying a much larger area in earlier times?

We do not really know yet to which of these conditions the "Cirio" belongs but the evidence derived from its habit of life seems to indicate that the area where it grows naturally will expand. This will be north and south in Baja California, possibly reaching the United States in the two southern counties of California, San Diego and Imperial.

It is a well known fact that mature plants can stand the vicissitudes of nature (varieties of soil and rock, cold, heat, drought and excessive moisture) better than young. Only when benign conditions prevail long enough for that plant to mature does the genus survive. If these conditions exist over a greater area than the plant now occupies, the home area will increase; if less it will contract.

The "Cirio" endures at Vacaville severer climatic conditions than in Baja California, and thrives. The soils are neutral or slightly alkaline, probably not much different than those of Baja California. The main difference is climatic:

#### Baja California

Soils sandy, rock.

Temperatures 30 to 130.

Rainfall 5 to 20 inches, winter and summer,

#### Central California

Soils sandy to heavy.

Temperatures 20 to 115.

Rainfall 10 to 50 inches, winter.

It is evident from the above that summer rains, though at times few and far between, are what determines the difference between life and death in the young plants. Old ones will live in central California as shown by their cultivation at Vacaville. They enter a state of estivation in late summer and remain dormant until fall or until the winter rains begin. This, the very young "Cirios" are unable to do.

As summer rains occur both north and south of the present home of *Idria columnaris*, I believe there is good reason to predict the extension of its present habitat.

F. B. NOYES, Vacaville, Calif.



## NEW SPECIES FROM PERU

By JOHN AKERS

*Peruvocereus salmonoideus* sp. nov.

Plantae ex basi ramosae circa 1 m. altae; rami 6-12 costis depressis circa 22; caules 10 cm. lati irregulariter et leviter constricti; areolae 5 mm. latae, 7 mm. longae 3 mm. altae dense tomentosae circa pilis 25-30 albis tenuibus; spinae laterales aciculares circa 60, 6-8 mm. longae; spinae centrales 1-plures aciculares 2 cm. longae flavae vel cinereae; flores anguste infundibuliformes segmentibus exterioribus linearibus brunneis reflexis, segmentibus interioribus spatulatis rosaceis, limbo circa 4 cm. diametro, tubo circa 6 cm. longo flavo-viridi squamato squamis angustis apiculatis viridibus pubescentibus; staminibus numerosis inclusis filamentis viridibus antheris circa 2 mm. longis oblongis eburneis; stylus paullo exsertus viridis; fructus turbinatus viridis et rosaceus 6.5 cm. diametro, squamis fructum apiculatis in quarum axillis pilos circa 20, 7 mm. longos; semina nigra lucido-punctata.

Plants up to 1 meter high, branching from the base: the number of branches varies from 6 to 12; about 22 very low ribs with prominent, felted, spine cushions; areoles 13 mm. distant, large, elliptical and elevated (7 mm. long, 3 mm. broad and 3 mm. high); spine cushions actually composed of dense, white, kinky hairs when viewed under magnification; about 80 acicular spines or bristles emerge in all directions making a formidable spiny cushion; spines fairly uniform in length (6 to 8 mm.), but one or more 2 cm. long, central, acicular, pungent spines may be present; spines yellow when new, turning gray with age; about 30% of the spines are so fine that they resemble bristles; stems about 10 cm. thick (during growing season) and non-uniform in diameter; epidermis light green, making an excellent background for the white spine cushions; growth of bristles concentrated at the top of the stems where the white, woolly buds appear; flowers narrow funnelform with much reflexed outer perianth segments; inner segments spatulate and flesh pink in color; outer segments linear and golden brown; limb about 40 mm. in diameter, expanded, rotate; tube about 60 mm. long, narrow and light yellow green in color; tube with long, narrow, apiculate scales which are tipped darker green, scaly and hairy; stamens many, included; filaments thread-like, greenish and attached above the nectary space, along the wall of the tube and at the base of the petals; anthers ob-

long, ivory colored, and attached by a constricted neck to the filaments; anthers small, not over 2 mm. long by 1 mm. wide; style slightly exserted, greenish and rather slender; stigma lobes 12, 8 mm. long, yellow green and velvety; nectary space 5 mm. in diameter by 15 mm. long, fluted (like corduroy); ovules, many, white, minute, translucent (like polished grains of rice); ovules on stalks up to 1.5 mm. long; fruits large up to 6.5 cm. in diameter, top-shaped, epidermis green, tinged with pink; luster-dull; areoles 1.5 to 1.8 cm. distant; scales apiculate, minute and bearing about 20, 7 mm. long, white, silky hairs in their axils; flower remains brown, white-hairy, persistent; fruits puckered at the base of the flower remains; pulp white, translucent globules, appearing like frozen snow; pulp acidic, edible; seeds black, shiny, small, punctate with a small, narrow, bone-gray hilum; roots thick, long, woody with loose scaly bark.

Type locality: Rimac Canyon, Department of Lima, Peru, at about 15 kilometers above Chosica.

This species is rather characteristic of the genus, although it is not as bristly as many of the other species. Once the plants reach maturity, they flower readily and produce many large fruit. The name is descriptive of the soft flesh or salmon pink color of the flowers. Although the flowers are not very showy, the spine arrangement and the white spine cushions make this a very attractive species.

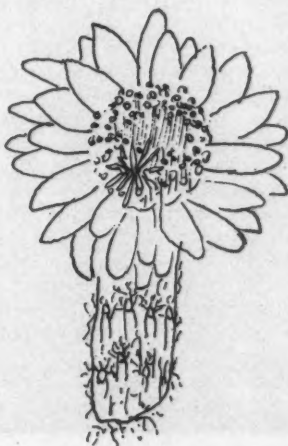


FIG. 72. *Peruvocereus salmonoideus* sp. nov.

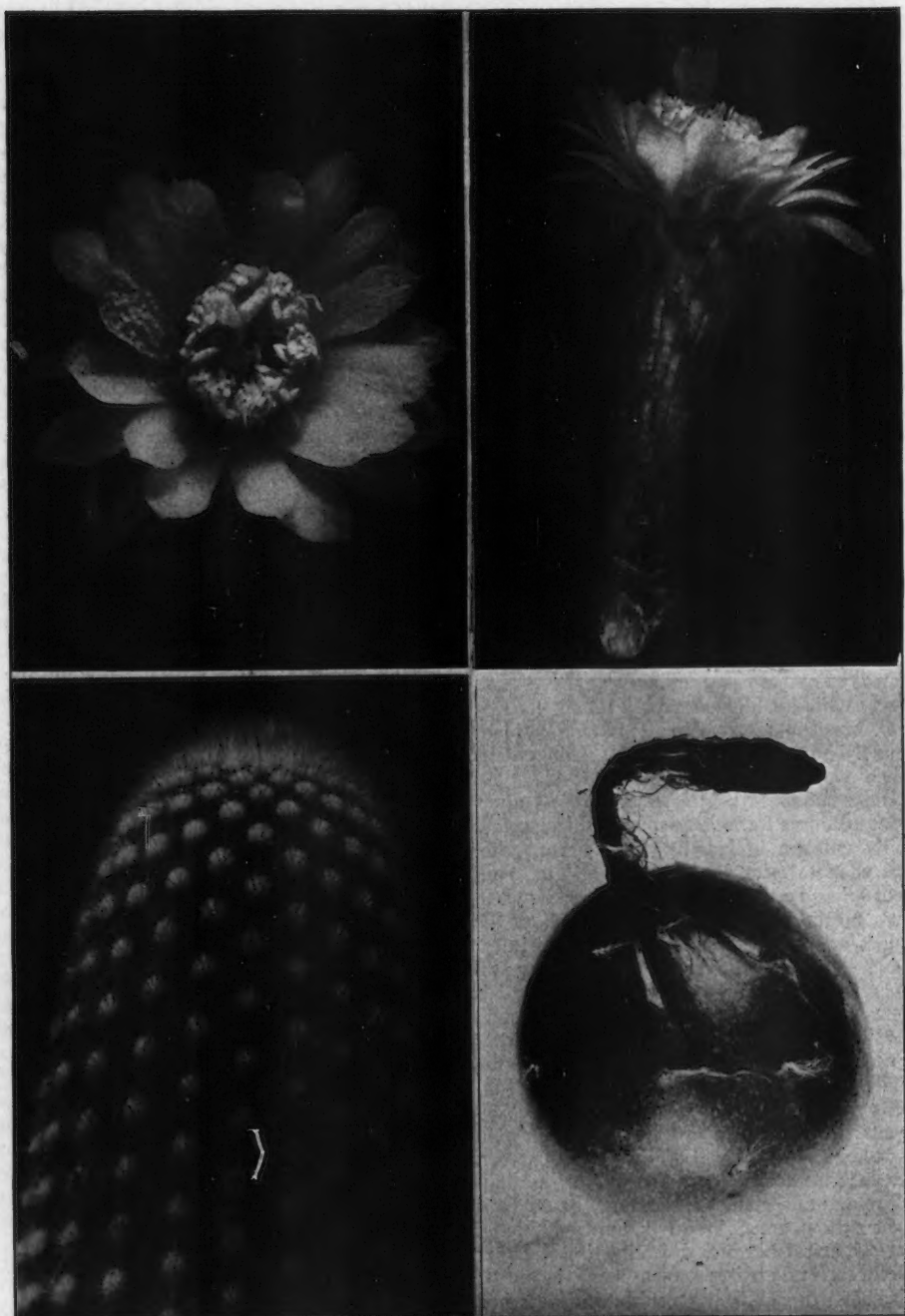


FIG. 73. *Peruvocereus salmonoides* sp. nov. Photos by author.

## The Orchid Cactus

By MRS. CACTUS PETE

Epiphyllums are the orchids of the cactus family. Originally, there were but sixteen species, which grew wild in the jungles of Mexico, Central America, and the northern part of South America. These species were epiphytic, and grew in decayed trees or in clumps of moss. Many of them were found side by side with true orchids.

These original species were white-flowered, and most of them were night-blooming. This has caused them to be called night-blooming cereus, although they are far removed from the cereus botanically. They are a true cactus, despite the fact that they have few or no spines.

The great beauty, size, and fragrance of the flowers of these species led botanists to take a serious interest in their development. It was found that they hybridized easily with some of the bright-hued types of cactus, particularly with the *Heliocereus speciosus*, a lovely red-flowered species with an indescribable iridescence, ranging from almost pure purple through all the tones of magenta, cerise, and mauve, often to snow-white on the edges of the petals. Present-day Epiphyllums (or phyllo-cacti, as the hybrids are often called) include several varieties in which this iridescence ranges through every color but blue. Blue is a color lacking in the entire cactus family, and the hybridizer who can achieve a blue variety will find himself famous.

Epiphyllum hybridizers are working to achieve a greater color range, increased size of blooms, longer lasting flowers, and a longer blooming period.

During the past twenty years, the blooming period of Epiphyllums has been nearly doubled; there are now many plants that have a few scattered blooms the year around and masses of bloom during late April, May, and early June.

A few of the newer hybrids, when well cared for, have flowers 10 to 11 inches across. Some types have a lacquered, waxy appearance, while others are crepey and almost veil-like in texture.

As several of the original species possess night fragrance, this characteristic has been transmitted to some of the new varieties. The night fragrance is all the more surprising because the plants are completely lacking in fragrance during the day (except in the early morning).

A deep, rich, pure yellow Epiphyllum is another goal of hybridizers. Up to now, the yellows have been in the lighter tones.

The wild species are all quite large types, and most of the hybrids developed as a result of crosses with them have also been large-flowered. However, successful crosses have been made with a small-flowered pink species (*Nopalxochia phyllanthoides*). From the original hybrid of this species have been developed an entire series of "basket type cactus orchids" which are most adaptable for growing indoors. These types have smaller, longer lasting blooms that are excellent for corsages. Also, they are suitable for growing in limited spaces, are very free blooming, and tend to bloom twice a year. Their color range is extensive.

Epiphyllums require surprisingly little care and need not be grown in hothouses (except in frosty areas) although they are very adaptable to indoor culture.

After much experimenting, we feel that the best soil mixture for the amateur grower to use in potting Epiphyllums is one of equal parts of good topsoil, leaf mold, and coarse building sand (fine sand often cakes), with a generous amount of charcoal or charred wood added.

This soil mixture will be adequate for the first year but, as the plants grow larger and use up the nutrients, some feeding will be necessary. A balanced commercial fertilizer (applied according to directions) or well-rotted manure (both steer and rabbit manures have given good results) may be used. Epiphyllums respond well to liquid fertilizers, but these must be applied more often. Dry fertilizers, on the other hand, may be applied before and after the blooming season, and will suffice for the entire year. An occasional change of diet to include a small amount of blood meal or bone meal is recommended by some growers.

If leaf mold cannot be obtained, it seems best to use equal parts of loam and gravel, or coarse sand, with a generous handful of well-rotted manure in the bottom of the container. By the time the roots reach the manure, they are strong and well-established and there is no danger of their burning.

The use of peat moss by amateur growers is discouraged, as it holds excess moisture, and there is danger that plants will suffer from over-watering. Also, peat moss may tend to make the soil too acid and thus encourage root-rot.

Tests have proved that plants grown in tin cans or in wooden containers are stronger and

have more and larger blooms than those grown in clay pots.

Plants grown in pots require about twice as much water, and the soil becomes hard and compact. This is detrimental to Epiphyllums, which should have a loose, airy root-run and perfect drainage.

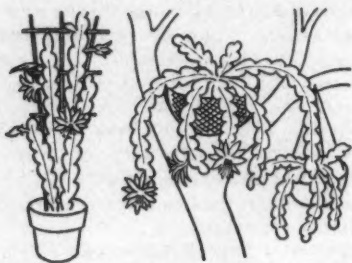


FIG. 74

*Epiphyllum trained on pot trellis. To grow in a tree, surround roots with compost, place them in wire frame, and fasten onto the tree.*

The soil in cans can be kept properly aerated by means of holes punched around the base of the can. If no holes are made in the bottom of the cans, the undersides will remain clean and free of sowbugs and slugs (a good method for many plants).

Benches made of heavy slats, spaced about an inch apart, also help to solve the pest problem, as insects cannot collect under the containers. Three inches of crushed rock spread over the ground surface of the lathhouse will practically eliminate snails, considered the worst enemy of cactus orchids.

Plants should be kept moist, but not wet, all through the blooming season. When the plants are not in bud, they may be sprayed overhead; otherwise, they should be carefully watered from below, as water on the buds causes them to drop.

Epiphyllums require sunshine, but will produce good blooms in complete shade if there is an abundance of reflected light, as from stucco walls or paved patio floors. If grown in too much heat, Epiphyllums will produce a mass of flowers all at once, and then do little more.

In warmer climates, Epiphyllums grow ideally in lathhouses, and it is a glorious sight to see a well-grown plant hanging in a tree (or from the roof of a lathhouse or greenhouse), with its flowers showering down to eye level. Plants so grown may be combined with asparagus fern which forms a soft green cushion for the orchid cactus.

Epiphyllums may easily be wintered in the north if they are kept dry throughout the coldest part of the winter and treated the same as the Christmas cactus, a near relative. They can be wintered in a furnace-heated basement if they are kept dry and dormant. (Do not place near furnace.)

Plants being trained upright should not be allowed to become too dense at the base, as the crowded, innermost stems will produce but few blossoms. An upright plant may be forced to grow taller by allowing only a few branches to grow from the base of the plant. It does no harm to pinch out the tips of the new growth when the plants have grown to the desired height.

Not very many gardeners know that Epiphyllums produce fruits. Each variety bears a slightly different type of fruit with a different flavor. All are palatable, and some are delicious. Those which are bright red inside are especially attractive in fruit salads. All Epiphyllum fruits become very fragrant when ripe, and are highly valued for this quality. Birds favor them, too.

Epiphyllums are not complete strangers to Northwest gardeners, many of whom are growing them successfully as house plants.

Herbert Williams, President of the Washington Cactus Society, treats his plants a little differently from the average gardener. He sinks the pots in a flower border in summer, and brings them inside in the early fall. The plants are then kept in the basement, where the average temperature is about 50°, until they are about ready to bloom. When the buds show color, the pots are placed in a sunny window in his living room. When questioned about bud-drop and other difficulties with Epiphyllums, Mr. Williams stated that he considered over-watering and poor drainage the main reasons for failure in growing them.

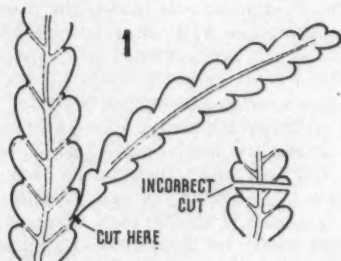


FIG. 75

(1) Cuttings 10-16 inches give quick bloom; some consider 6 to 8 inches better. Do not cut through unseen vein running from eyes to the center stem where new growth starts.



Few gardeners seem to realize that Epiphyllums are excellent for flower arrangements, and even fewer know that they make good corsage flowers. Florists' shops have used them to make exotic corsages.

The favorite variety for corsages is the Deutsche Kaiserin (or Empress), a basket type with delicate apple-blossom-pink flowers that are very long-lasting. From three to ten blossoms are used in a single corsage, and are often combined with gypsophila or a bit of fern.

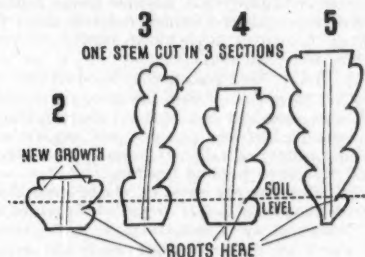


FIG. 76

(2) Cutting with 3 eyes makes new plant; (3), (4), and (5) are pieces of one stem. Each makes a good plant. No. 5 makes strongest roots, new growth from top eyes, tall plant.

Poinsettia, a brilliant red basket variety is also a favorite for corsages, especially in winter. Large cactus orchids are used in the same way as true orchids, with one or two perfect blooms for a corsage.

Only freshly opened flowers should be used for cutting, in order that they may last as long as possible. When you wish to cut flowers for corsages or arrangements, go over the plants in the late afternoon, noting the buds that have begun to swell and are about to open. If a piece of thread is hung over the buds you wish to use, you can be sure which flowers opened last.

It is very important, when cutting flowers, to leave a small part of the flower attached to the mother plant. This section soon dries and falls off, leaving the plant undamaged. When blooms are constantly and carelessly removed from plants, the flower-bearing eyes become bruised and cannot produce new growth. If a section is left, the remaining eye (or bud) produces flowers year after year. As many as three blooms may come from the same eye at one time.

Hybrids must be grown from cuttings if you wish them to be true to color and type. If a large, fast-growing plant is desired, it is best to start cuttings in gallon cans, thus assuring ample space for expansion of the root system. If quick blooming is desired, a crowded root-

system is necessary, as root-bound plants bloom more profusely.

It usually takes two years before blooms are produced, although cuttings 12 or 18 inches long placed in quart cans will often give blooms the first season. However, it is best not to allow plants to flower until they are more mature.

All cuttings should be left in a cool, shady place for one or two weeks before they are planted. A thick, juicy cutting needs to lie longer than a thinner, dry one. If dried too quickly, cuttings are apt to form a brittle scab that may later split open and become infected. A slowly dried cutting will have a very tough, rot-resistant scar-tissue.

It is possible to save badly withered cuttings of choice varieties by planting them at once in very dry soil in a cool, shady place, and withholding water for at least two weeks. Start to water very sparingly, and keep the cutting on the dry side until it begins to get plumper. Placing withered cuttings in a solution of vitamin B<sup>1</sup> is also a helpful practice.

When making cuttings, choose the older growth, as it makes the strongest roots. A long cutting produces a stronger, faster-growing plant than a short cutting, as it has more substance. The first roots come directly from the woody core.

It is possible to start cuttings in water; but this is not advisable, as it produces a weak, watery root that may be injured easily or may rot. The strongest roots are formed when cuttings are started fairly dry and are kept dry for at least two months.

If you purchase small rooted plants, it is always safest to plant them in a perfectly dry soil mixture, and to withhold water for at least three days. Then water the plant sparingly until it is re-established.

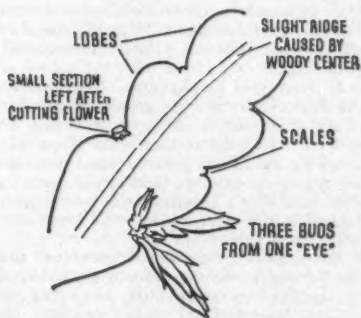


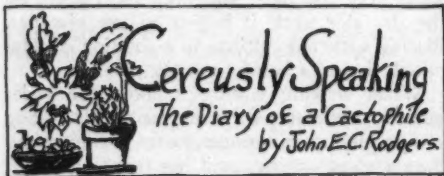
FIG. 77

Scales between the lobes are all that is left of true leaf. Eye is hidden behind the scale.

The soil around the roots of adult plants being transplanted should be completely dry. Remove the plant, divide it, and remove some of the old soil from around the roots. The plant may then be replanted in new soil, which should also be dry. Withhold water for at least a week after transplanting or re-potting, then begin watering sparingly. Plants which are damp or watered at once may rot off at the base. A dry plant cannot rot. Quite frequently the best blooms are obtained from newly repotted plants when they are put back in a pot of the same size in which they grew formerly.

#### EPIPHYLLUM TIPS

Place your pots of Epiphyllums outside when the next rainstorm comes along. If the pots are properly drained, this is an effective way of leaching out deposits of alkali that have accumulated in the pots.



July 1. *Selenicereus donkelaeri* bloomed; 8½ inches long and 8¾ inches across. *Adromischus maculatus* in bloom; not over 10 blooms to a stalk so far, usual number on mine is 5-7; more like *A. cooperi* (true, not *A. festivus*) in flowering habit. *Thelocactus bicolor* growing in large pot of soil with *Eriocereus jubertii* (*Echinopsis* hybrid according to Br. & R., Vol. II, pg. 158. Marshall and Bock give it generic rank as a true *Eriocereus*). Thrifty, fast grower; rich soil of coarser texture seems to suit it best; new shoots are reddish in full sun.

July 3. Watered all the plants and set ventilators for clear weather. *Gymnocalycium mihanovichii* seedlings had first bloom. Another reminder of my buys in 1931 from Gene Ziegler; parent dead after re-rooted twice, nematodes. Dr. J. F. Machwart uses bichloride of mercury. 1001-1 solution—one tablet to a pint of water. He thinks it helps to control in soil as well as when infected plants are de-rooted and soaked in same.

July 6. Front yard Epiphyllums "Askermannii" and Deutsche Kaiserin in bloom—grown on porches and under bushes, hereabouts. *E. oxypetalum* buds set but two or three weeks before they open. Gave plants a good soaking by filling pots to rim, then sprayed without damaging coatings, with tepid water; clean and refreshes. Plants in greenhouse need high moisture content in the air around them. Especially after a hot day, tepid water helps.

July 8. *Gymnocalycium damsii* bloomed; pinkish-lavender turning to almost white when older, almost double. Is liked by spine bugs, black fungus and thrips. Use "Black-leaf 40" spray frequently. One of the window sill types.

July 10. Mixed "Black-leaf 40" on the strong side and soaked the soil around several plants; works for me against ants. *Opuntia compressa* flowers are al-

most gone—began flowering June 20; wet weather and weeds seem to encourage large flowers.

July 11. Plants outside got a good soaking from rain during the night. Gave inmates of greenhouse plenty of water. *Selenicereus pteranthus* bloomed; one of my consistent bloomers since I got it in 1932 as a 6-inch cutting from Woolworths. *Lobivia bertrichiana* bloomed; is dependable and offsets freely, rapid grower. Has shorter tube than *Echinopsis* but red is rare in long tubes. Fertilize it freely each spring with pulverized "old chicken" manure. Does best for me in small pot. Plant is more elongated than *Echinopsis*.

July 17. *Selenicereus grandiflorus* bloomed. One of those types that resemble the other 14 or 15. *Bergeranthus scapiger* budded. Has multiple bloom (succession) on single stalk. Has triangular leaves about 3½ inches long. Clustering heads bloom freely. 49° coldest for this date since 1892.

July 19. Rainy; kept greenhouse closed all day. No sunshine but thermometer went up to 112°. *Pseudorhipsalis micrantha* had two blooms; heavy perfume. Watered whole collection. 94° at 5 p.m. Agaves outside looking better; etiolation has disappeared. Mixed more soil for plants needing repotting.

July 23. *Coryphantha runyonii* (large one) dead. Treated for fungus by former owner which proves the adage, "Treatment was a success but the patient died." Cluster was 6 inches across; have small one started. Slow grower; from Texas.

July 25. *Borzacactus straussii* dried back on tallest stock. (Prevalent on *Borzacactus* in local collections. Due no doubt to some deficiency in soil. Gave top dressing of sand, dried chicken manure and wettable sulphur; the latter acts as a fungus destroyer in soil. Sprayed with mixture of "Black-leaf 40" and wettable sulphur; has recovered and has healthy new growth from top and base. Which was it the fertilizer, fungicide, or foolishness that cured it? The plant is 2½ inches in diameter and 18 inches high. E. J. Fish, Strongsville, Ohio, has one about 3 feet tall and flowers regularly; he uses cow manure and "Nicoform" burned.

July 26. *Huernia penzigii* still in bloom, maroon and blood red. *Stapelia*s in pots in benches three feet above ground are slower budding than those near glass. The best year for *Stapelia*s was when I suspended them from mullions of greenhouse from late fall to mid-spring. Most of them turned purple but they bloomed. Rich soil on the coarse side.

July 28. Three days of sunshine has helped to dry the soaked soil of the plants under the grape arbor. Why is it that spine bugs go for *Harrisia martinii* but do not touch *H. tortuosa*? They are side by side and I spray the former from early spring to late fall. There are others too. I'm at a loss to know the reasons but I'll find out before I give up.

July 29. Agaves (small potters) in place under grape arbor, are snail food during wet weather, especially the tender leaves just outside the heart. The offsets are so numerous that the soil is being forced out of the pots.

July 31. Eighteen days of sunshine this dry month. Have had 42 cacti bloom to date. For the early spring blooming *Epiphyllums*, *Echinopsis*, *Heliocereus*, *Selenicereus*, and *Mammillarias* I fill small pots with chicken manure and sink them about an inch into the soil of the larger pots; I fill these pots with water twice a week and let the richness leach into the soil. Makes things healthy. I intend to try this on budded plants to see if buds actually abort. So far, I've fertilized during budding periods and plants went on blooming.



# SPINE CHATS

LADISLAV CUTAK



Greetings friends! Say, didn't we have a grand time in Cincinnati at the second national Convention of the Society? To be sure we didn't have as large a crowd as in St. Louis but the enthusiasm couldn't be beat. In fact, we got better acquainted with each other; so much so that we began calling ourselves by our first names. Outsiders may call us 'cactus nuts' but, by golly, you won't find a more enthusiastic crowd anywhere among other plant-minded people!

The Conventionites began arriving early on the first day of the confab. Some already were in town, particularly the Californians, who had a longer way to travel than most of us. At registration time on the mezzanine floor of Hotel Sinton we got our first chance to mingle with old friends and make new acquaintances. Upon payment of the registration fee, a ticket covering the luncheons and banquet was presented to us and also a shiny gold medallion which was to identify each attendant. The souvenir tag was really a handsome thing which all of us will treasure. It was the gift of John Haag, our enthusiastic member from St. Paul, Minnesota.

At midday the registrants hied themselves to Eden Park where a delicious luncheon was prepared in the patio of the Art Museum. That juicy ham was really cut thick and suited our appetites well. After the repast we retired to the cozy auditorium where serious business was in order. Mr. Irwin M. Krohn, President of the Board of Park Commissioners, welcomed the delegates and extended the hospitality of the city fathers. Bill Marshall, tireless worker and chairman of the Convention, presided over the meeting and then reviewed the history of the Society. Marshall also handled all the remaining assemblies and in a superb manner as only he can. We have to hand it to Bill. This fellow carries tremendous responsibilities on his shoulders and often some of us have criticized his actions loudly but he has stood up nobly to all our tirades. We owe a lot of gratitude to Bill Marshall, and also to Scott Haselton, the editor, who also comes in for his share of criticism. If we only realized the tremendous responsibilities these two fellows shoulder for the good of the Society, I'm sure we would be less critical of their work.

Dr. Elzada U. Clover of the University of Michigan was the principal speaker on the Thursday evening program. Only recently she returned from an extended sojourn in Guatemala and we looked forward to her pictures and vivid account of this trip. The busy botanist is one of the most democratic scientists that we know and she is well liked by all our members. Laval Goulet told us something of the difficulties he encounters in growing cacti in Canada where the winter temperatures often reach 50 degrees below zero. Then John Haag wound up the evening session with an informal talk about The Conservatory—his own private greenhouse—and extended invitations to visit him when in St. Paul or vicinity.

Friday's programs were held at the Sinton Hotel, with Scott Haselton, John E. C. Rodgers and yours truly discussing the Cactus Journal and our respective departments at the morning conclave; while Bill Marshall, director of the Desert Botanical Garden in

Papago Park, took over the afternoon session, showing us some magnificent color slides of the Arizona garden. Incidentally, our next convention will be held at this garden in 1949 and we are anxious for the biggest turnout in history. Howard Gates of Corona, California, was elected general chairman of the next get-together and I will serve as vice-chairman. Even at this early stage we can promise you many new fine features, so start saving your pennies for the biggest entertainment value in the Cactus World. At the luncheon we had the pleasure of hearing Mr. B. Y. Morrison, Principal Horticulturist of the Bureau of Industry in Washington, tell us about the American Horticultural Society and the quarterly magazine which carries a cactus supplement in each issue. I might also add that I had the pleasure of showing some excellent kodachromes taken by Dr. Juan Iwersen and Rolf Schaur on a recent exploration trip which I undertook to Mexico's wilderness.

Saturday's sessions were held at the Krohn Conservatory in Eden Park and at Hoten Sinton. A group picture of the entire assemblage was taken by a commercial photographer in front of the Krohn Conservatory and from the proofs seen it turned out to be a nice remembrance. Individual cameras were clicking everywhere. It was a field day for photographers. After the picture an inspection tour of the Conservatory was undertaken. On view, besides the permanent collection, were exhibits of the California Cactus Growers Association and other dealers; Pirtles of Edinburg, Texas; Schmolls of Cadereyta, Mexico; and Rutenschroer of Cincinnati. Members of the K.I.O. Cactus Club also held their own show of dish gardens, button gardens, specimen plants and rareites, which I had the pleasure of judging with Dr. Elzada Clover and Mr. Stewart of the Krohn Conservatory. At the banquet in the evening, Howard Gates was the featured speaker and he gave a highly interesting talk on his exploratory trips into Lower California. Other speakers included Mr. Irwin M. Krohn, Mr. Stewart, Dr. Henry Shetrone and several others. Carl Brassfield, president of the Cactus and Succulent Society of America, made a few remarks and then closed officially the Convention of 1947. The Cincinnati conference is now history but its memories will linger long in our minds.

*Sidelights.* The Detroit Cactus and Succulent Society was the best represented affiliate at the Convention, about eleven members making the journey. We are all glad to make their acquaintance. Mr. and Mrs. Laval Goulet of Amos, Quebec, endeared themselves to all. Your Spine Chatter found them good sports, especially when he murdered the French language in their presence. Bill Reedy, the "Mississippi Canary," regaled the audience with his southern drawl. Another southerner was Mary Hester from Clovis, New Mexico, who was lots of fun. Her husband, Ives Hester, was also present and I was pleased to learn that he held a sheriff's badge. Should I ever get into trouble in New Mexico, this is the man that can help me out of it. Unsolved mystery: no delegates from Des Moines, Kansas City, Milwaukee and Oklahoma City were in attendance. We missed you folks!

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Pres. Carl Brassfield's convention report was received too late for this issue. Watch for the August JOURNAL.



